DOCUMENT RESUME

ED 094 372 CS 001 287

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TITLE The Child's Concepts of Language.
PUB DATE 31 Jul 73
NOTE 11p.; Paper presented at the Annual Meeting of the United Kingdom Reading Association (Totley-Thornbridge College of Education, Sheffield, England, July 31, 1973)

EDRS PRICE MF-$0.75 HC-$1.50 PLUS POSTAGE
DESCRIPTORS *Beginning Reading; *Language Development; Language Skills; Literature Reviews; Reading; *Reading Instruction; *Reading Readiness; Reading Research; *Reading Skills; Writing Skills

ABSTRACT

In learning the skills of reading and writing, it seems most probable that the child has to become aware of certain aspects of spoken language which he has not previously perceived. Although the child is capable of saying and hearing words and can easily tell them apart from other words, to spell them phonically he must understand the concept of phoneme and the way in which phonemes follow one another in a special order of time. It is concepts like these--word and phoneme--which seem to be essential to the child's thinking about the tasks of learning how to read and how to write. A fair amount of evidence has accumulated to show that the problem of learning to read lies in this development of cognitive clarity. Research studies suggest that there are specific concepts of language which are important in learning how to read, including the concepts of word, phoneme, sentence, reading, writing, letter, and so on. The key to effective concept learning is the provision of experiences which stir the child's curiosity, and provide sufficient reliable information for discovery of the concept. (WR)

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PAPER PRESENTED AT THE ANNUAL CONFERENCE OF
THE UNITED KINGDOM READING ASSOCIATION,
TOTLEY-THORNBRIDGE COLLEGE OF EDUCATION,
SHEFFIELD, ENGLAND, 31 July, 1973

THE CHILD'S CONCEPTS OF LANGUAGE

I. Thought and Language

Perhaps Piaget's greatest contribution to practical improvements in education has been his persistent demonstration of the need to be suspicious of all adult "common sense" assumptions about children's behaviour. For example, Piaget's (1959) studies of the language and thought of children have taught us to be cautious in drawing conclusions about what a child knows or understands from observations of his actions or speech. For instance, the child may be able to say "three sevens are twenty-one" without having any of the relevant number concepts. Thus, what the child says about numbers may tell us nothing about his mathematical knowledge. Or the child may be able to use his speech apparatus to produce sounds like "cat," "cot," and "cut" without any awareness or understanding that he is manipulating the vowel sound only.

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Thus, what the child does in activating his vocal apparatus tells us nothing about his linguistic knowledge. In summary we must not assume that the child has the corresponding concept just because he can say the word for it or perform some action which appears to reflect its use.

In learning the skills of reading and writing it seems most probable that the child has to become aware of certain aspects of spoken language which he has not previously perceived. For example, in order to write fish and chips or bread and jam correctly he needs to understand the concept of word. Previously he heard and said "fishnchips" and "breadnjam." Similarly (though much more difficult), although the child is quite capable of saying and hearing "jam" and can easily tell it apart from "ham," to spell them phonicly he must understand (1) the concept of phoneme (minimum sound unit) and (2) the way in which phonemes follow one another in a special order in time. Then he can write j, followed by a, and then m. This becomes even more important in his free writing when he wants to write more difficult words or new words such as "yam."

It is concepts like these--word and phoneme--which seem to be essential to the child's thinking about the tasks of learning how to read and how to write. In psychology we use the technical term "cognition" to describe this category of mental behaviour which in everyday speech is called "knowing" and "understanding." Thus, "cognitive learning" means the act of getting to know or understand something. In teaching children to read and write we are trying to develop their cognitive clarity about these skills. We want them to know and understand how to read and how to write and all the many other "how tos" which they will meet on their way to developing the whole complex skill.

II. Early Linguistic Concepts

What has been said in the previous section is not only theory. A fair amount of evidence has accumulated to show that the very nub of the problem of learning to read lies in this development of cognitive clarity.

The earliest research clues to this finding were found in the studies of M. D. Vernon (1957) in England and Vygotsky (1962, but written in Russian much earlier) in the U.S.S.R.

Vernon made a comprehensive international review of the research on causes of reading disability. She concluded from her extensive survey and intensive psychological analysis of all the data: "Thus the fundamental and basic characteristic of reading disability appears to be cognitive confusion." She explains this cognitive aspect as follows. The child who has failed in reading is "hopelessly uncertain and confused as to why certain successions of printed letters should correspond to certain phonetic sounds in words." Vernon emphasized that the reading disabled child "does not seem to understand why" written language is what it is.

Vygotsky's contribution is more specific. His research on literacy acquisition in Russian children led him to just two conclusions. Firstly, "it is the abstract quality of written language that is the main stumbling block," and, secondly, the child "has little motivation to learn writing when we begin to teach it. He feels no need for it and has only a vague idea of its usefulness." This second point of Vygotsky's specifies one of the chief concepts which is absolutely essential if the child is to become a reader or a writer, that is, the concept of the function of written language--<u>why</u> people read and <u>why</u> people write.

The real breakthrough in this research came quite recently when Jessie Reid (1966) published her classic article "Learning to Think About Reading." In Piaget-type interviews with five-year-old beginners in a Scottish primary school, Reid explored what children think language and reading are. She found that such young children have quite different concepts to the ones adults tend to take for granted. She confirmed Vygotsky's conclusion that the beginner does not possess the fundamental concept of the functions of reading and writing. Reid reported that to these Scottish children, reading "is a mysterious activity, to which they come with only the vaguest of expectancies." Reid added to our knowledge of this problem in her finding that her subjects "had very little precise notion of what the activity consisted in."

The present author (Downing, 1970) replicated Reid's study. Similar interviews were conducted, but this time with English children from a primary school near London. The children, of course, expressed themselves in different individual ways but the conclusions confirmed Reid's earlier findings. These conclusions were further strengthened by the fact that the studies in England did not rely only on what children said about language and reading. A series of games and experiments were devised in which the children could demonstrate their knowledge and understanding of the concepts which are basic tools for thinking about why people read and how they do it. It made some difference but not much. The results left no room for doubt. The normal state of the young child taking his first steps in learning to read is one of cognitive confusion about these basic concepts of language.

The English five-year-olds were followed through their first year in the infants' department and it was possible to study their cognitive development. It became clear that their progress in learning to read depended on their growth in cognitive clarity (Downing, 1972). The more they understood why and how people read and write the better was their progress in learning these skills. With their growth in understanding came clearer concepts of such linguistic categories as word and phoneme. Their knowledge of the labels for these categories lagged behind their understanding. They knew what a phoneme was before they could describe it or label it - which is exactly what we should expect from more general psychological research on child thought and language. As Piaget (1959) has said: "Verbal forms evolve more slowly than actual understanding."

In the last few years psychologists in several countries have become interested in children's concepts of language, with the result that we now have rather strong evidence for the importance of cognitive clarity in learning to read. Meltzer and Herse (1969) in the United States used a number of methods to test American school beginners' concept of written word. For example, they gave each child a sentence printed on a card and a pair of scissors with the spoken request "please cut me off a word." Sometimes a child did cut off a word, but it was just as likely that the child's "word" would be half a word or more than a word. Kingston, Weaver, and Figa (1972) conducted a series of experiments designed to investigate American children's conceptions of both spoken word and written word. They concluded: "These five experiments demonstrate quite conclusively that first grade children lack precise concepts concerning the nature of 'a word'." In Canada, Downing and Oliver (in press) improved the technique

for testing a child's concept of spoken word to make sure that the young beginner understood the instruction of the tester better. But the result was the same, thus confirming that Canadian children begin in the same normal state of cognitive confusion in this respect as do Scottish, English and American beginners. Another study in Canada has related this investigation of children's linguistic concepts to the teacher's practical concern for reading readiness. Evanechko, Ollila, Downing and Braun (1973) constructed a new reading readiness battery which includes a paper and pencil test of several concepts of written language. Results of the tests indicate that the child's development of these concepts is an important factor in reading readiness.

Two other research studies have related children's concepts of language to growth. Lansdown and Davis (1972) used Reid's (1966) original interview method and Downing's (1970) first experimental testing technique to compare 24 normal children with 30 ESN pupils. Lansdown and Davis found that "the trends shown before were repeated" with the normal children, but that "consistent patterns of cognitive clarity" did not show "until the age of nine or so" in the ESN pupils. Hazel Francis (1973) conducted a series of tests of the language concepts, vocabulary, and reading achievement of 50 boys and girls in a Leeds primary school. She found that her highest correlation (.41) was between reading and technical vocabulary about language. When she statistically controlled general vocabulary skill the correlation was still considerable (.34), "indicating that factors independent of a general ability to deal with abstract concepts were involved in learning technical vocabularly, and that these were closely related to the reading process." This seems to suggest that there are <u>specific</u> concepts of language which are important in learning how to read. Some of these specific

concepts are known from the research reviewed above, e.g. word, phoneme, sentence, reading, writing, letter, and so on. Others may be guessed at, now that research has put us on the track of the importance of learning concepts of language in developing the skills of reading and writing.

III. Practical Implications

If these specific linguistic concepts are so important in learning to read, teachers will want to find ways of helping children to develop a clear understanding of them. But the teaching of concepts is full of pitfalls. The most common and dangerous trap is the temptation to tell. We should remember the example given earlier in this paper. If the child has learned to recite "three sevens are twenty-one" there is no guarantee that he understands what he is saying or knows the corresponding number concepts. In fact, telling may be worse than useless because, when the child learns to recite words he does not understand, he learns something in addition which works against our purpose. He may learn to believe, "I don't understand these things. I'm no good at it." Thus a barrier to understanding can be created by teachers who try to save time by telling.

The key to effective concept learning is the provision of experiences which (1) stir the child's curiosity, and (2) provide sufficient reliable information for discovery of the concept. The child's curiosity will be stirred if the language activities provided are relevant to his needs and interests. The sufficiency and reliability of the information contained in those activities depend on the teacher's planning and resources.

The most important thing of all is for the teacher herself to be clear about the linguistic concepts involved in learning to read. Unfortunately, the training of teachers has been so woefully inadequate in this respect that there is a real danger that many teachers have not thought out what linguistic concepts children need to learn in developing the skills of reading and writing. Probably, at the present time many children are learning these concepts like non-swimmers thrown in at the deep end of a swimming pool.

This is indicated by several comments included in Hazel Francis' (1973) article. She noted that, when children talked to her about language: "The outstanding feature was the almost universal reference to spelling, reading and writing. Almost no replies indicated an awareness of the use of words or sentences in the spoken language." Therefore, Francis concluded that the children "derived the concepts word and sentence from their mastery of reading and writing...." Francis also states that the "children developed an analytical approach to spoken language while they were engaged in learning to read." But the crux of the problem is indicated by Francis' perception of the child's floundering in the deep end of the reading swimming pool:

> "It was as though the children had never thought to analyse speech, but in learning to read had been forced to recognise units and sub-divisions. The use of words like letter, word and sentence in teaching was not so much a direct aid to instruction but a challenge to find their meaning."

That is the way it is. And who knows how many children fail in reading because of the deep end immersion in a sea of undefined linguistic concepts.

IV. Some New Ways

Between 1969 and 1972 a team of specialists from 14 countries worked together to study the universal characteristics of learning to read and write in varying cultures and differing languages. The results were published recently in a book Comparative Reading (Downing, 1973). One of the outstanding contributions to this cooperative study came from the U.S.S.R. Elkonin's report on that country describes in detail a method used with Russian children to help them to become aware of the concept of phoneme in spoken language and to understand how a word consists in a group of phonemes arranged in a special order in time.

Elkonin (1973) recognizes the adult's failure to appreciate the child's difficulties in understanding these apparently simple concepts:

> "The arrangement of a succession of sounds in a word, as well as the discrimination of a single sound in a word, seems an extraordinarily simple act for a normal literate adult. This illusion arises from the fact that, at this higher level of development, the operation occurs by then as abbreviated, generalized, perfected, and automatic mental behavior, which requires no effort and causes no problems. But the truth is that this is only

the final form of the process of the sound analysis of a word."

Elkonin goes on to describe "a method for materializing the sound structure of words" which bears some resemblance to the kind of activities which English primary schools have developed to provide concrete experiences of exemplars of mathematical and scientific concepts in recent years. Space does not permit a description here of these Russian methods for developing children's concepts of language. Elkonin's report provides full detail of the teaching techniques, the apparatus, and the research evidence in support of the method.

Recently, Elkonin's method was adapted for the English language and tested in an experiment with Canadian children. The results are encouraging. Ollila, Johnson, and Downing (in press) found that Elkonin's method not only improved five-year-olds' concept of the phoneme, but it also created superior reading readiness in comparison with children taught by two other well-known American reading readiness schemes.

However, the method itself may not be Elkonin's chief contribution. The great potential in his work is it's clear demonstration of what it is the child needs to know and understand about these particular linguistic concepts. Teachers who study or try Elkonin's method are likely to become better teachers of reading because of their clearer understanding of the problems which the child must solve in developing these basic conceptual tools of the tasks of learning how to read and write.

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